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## **WASTE CONTAINER WITH ANTI-MICROBIAL AGENT**

### **CROSS REFERENCE TO RELATED APPLICATION**

This application is a continuation-in-part of Application No. 10/348,657, filed on January 21, 2003, and also claims the benefit of U.S. Provisional Application No. 60/446,319, filed February 7, 2003.

### **TECHNICAL FIELD**

This invention relates to a waste container for receiving thrown up stomach contents.

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### **BACKGROUND OF THE INVENTION**

Often times health care providers have to deal with patients who have a high probability of getting sick to their stomachs and vomiting. Such a situation occurs regularly in emergency rooms in hospitals and clinics.

Conventional waste containers are known that are hand held by patients and health care providers. These include various vomit bags, dishes and bowls. However in many situations the patient or user of the vomit collecting device cannot do so on their own because of some incapacity. These patients require assistance from another to hold and handle the vomit collecting device which is not only unpleasant, if the user vomits, but also, in an emergency medical situation, ties up another health

care provider. Further, conventional waste containers are difficult to seal shut after the user has vomited into the container. Thus, the contents of the container may spill. Moreover, the contents  
5 of the container may be bacterially active and therefore harmful to anyone who accidentally comes into contact with the container contents.

#### SUMMARY OF THE INVENTION

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The present invention provides a waste container for receiving thrown up stomach contents. The container includes an anti-microbial agent to eliminate bacteria and other harmful microorganisms  
15 that may be present in the contents of the waste container.

According to the invention the waste container for receiving thrown up stomach contents  
20 includes an elongated moisture proof bag having an open end at the top of the bag and a rigid ring. The rigid ring is located outside of the bag open end. The upper length of the bag in contact with the inner wall of the rigid ring may be secured to the inner  
25 wall of the ring by an adhesive, a thermal weld, or by a heat shrink. The waste container also includes anti-microbial agent(s) that can aide in sterilizing the contents of the bag. The anti-microbial agents may be a brick or a powder at the bottom of the inner  
30 portion of the bag, a topical coating integral with the inner surface of the bag or a component of the resin the bag is made from. The anti-microbial agents may include, but are not limited to,

substances such as chlorhexidine gluconate, triclosan, silver ion impregnation, silver platinum or carbon impregnation, MEDI-COAT™, SURFACINE™, OMACIDE®, INTERSEPT®, BIOPRUF® and VINYZENE®.

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The waste container may also further comprise neck straps that allow for hands free use of the container whereby the container can be worn around the neck of a patient and easily removed for disposal by the patient or a health care attendant. In such an arrangement, elongated neck straps are connected to the rigid ring at an end and include neck connecting portions. The straps include a fabricated stress riser formed therein between the end connected to the bag and the neck connecting portion. The neck straps are frangible and caused to break along the stress riser through the application of any inadvertent threshold force which might become applied to either the bag, collar, strap, or patient. In the absence of such frangible feature, the patient might be strangled.

In one embodiment the bag comprises a synthetic resin film such as a polyethylene film. Likewise, the neck straps comprise a synthetic resin film such as a polyethylene film.

The fabricated stress riser may be a partial cut, a scored line or a perforated line or other weakness formed in the neck strap.

These and other features and advantages of the invention will be more fully understood from the

following detailed description of the invention taken together with the accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

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In the drawings:

FIG. 1 is a perspective view of a waste container having an anti-microbial agent at the bottom  
10 of the inside of the waste bag;

FIG. 2 is a perspective view of a waste container having an anti-microbial topical coating integral with the inner surface of the waste bag;

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FIG. 3 is a perspective view of a waste container having an anti-microbial agent as a component of the bag resin;

FIG. 4 is a perspective view of a waste container in accordance with the present invention having elongated neck straps; and

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FIG. 4A is a blow-up view of the stress riser portion of the waste container neck strap.

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#### DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail, numeral 10 generally indicates a waste container comprising an elongated moisture proof bag 12 extending through the inside of a rigid ring 14. The

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rigid ring 14 is integrally connected to a bag open end 16 of the bag 12.

FIG. 1 illustrates a waste container 10 in accordance with the present invention. An elongated moisture proof bag 12 extends through the inside of a rigid ring 14. The elongated moisture proof bag 12 has an open end 16, an inner surface 18 and an outer surface 20. The area bounded by the bag open end 16 and the bag inner surface 18 defines an inner portion 22 of the elongated moisture proof bag 12. The rigid ring 14 integrally connects to the bag open end 16. An anti-microbial agent 24 in the form of a brick or powder rests at the bottom of the inner portion 22 of the bag 12.

FIG. 2 further illustrates a waste container 10 in accordance with the present invention. In the waste container 10 of FIG. 2, a topical anti-microbial coating 26 is integral with the bag inner surface 18.

FIG. 3 further illustrates a waste container 10 in accordance with the present invention. In the waste container 10 of FIG. 3, an anti-microbial agent 36 is a component of the resin of the bag 12.

FIG. 4 illustrates a waste container 10 in accordance with the present invention having elongated neck straps 28. The elongated neck straps 28 have a bag connecting end 30 connecting to the ring 14 at the bag open end 16 and a neck connecting portion 32. The waste container 10 is set in front of the neck of a patient and the neck connecting portions 32 of the

neck straps 28 are tied behind the neck of the patient (not shown). The elongated neck straps 28 include fabricated stress risers 34 formed therein along the width of the neck straps 28 in an area between the bag  
5 connecting end 30 and the neck connecting portion 32. FIG. 4A is a blow-up view of a stress riser 34 on a neck strap 28. Application of a threshold force causes the neck straps 28 to break at the stress risers 34.

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Although the invention has been described by reference to a specific embodiment, it should be understood that numerous changes may be made within the spirit and scope of the inventive concepts  
15 described. Accordingly, it is intended that the invention not be limited to the described embodiment, but that it have the full scope defined by the language of the following claims.